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Original Articles

THE TREATMENT OF PULMONARY TUBERCULOSIS BY THE INHALATION OF ANTISEPTIC NEBULÆ.*

By HOMER M. THOMAS, A.M., M.D., Chicago.

AT the Louisville, Ky., meeting of the Mississippi Valley Medical Association I had the privilege of presenting microscopic proofs of the penetrability of vaporized medicaments into the pulmonary alveoli. Previous to that time all text-books on this subject stated that it was impossible for nebulæ to reach beyond the smaller bronchial tubes. A demonstration of the fact that nebulæ do reach the pulmonary alveoli raises the question of their efficacy in the treatment of pulmonary phthisis. Work demonstrating the value of this form of medication in the treatment of pulmonary tuberculosis has been going steadily on until the present time.

It is the purpose of this address to present such clinical facts as have been obtained through the use of this special form of medication in the treatment of pulmonary phthisis. There is no specific treatment of this disease. Cures are reported upon every hand through the media of many agencies. The disease being a complex one in its varied manifestations, each case should be treated upon such special lines as are individually indicated. The basis of all successful treatment is in the maintenance of nutrition. As a corollary to this is the influence of selected climate, judicious exercise, rest, baths, internal medication, and all other collateral agencies which stimulate vital resistance.

Having surrounded each case with the essential conditions for repair of the pulmonary lesion, what relation does the inhalation of antiseptic nebulæ bear in the role of cure?

The answer to this query involves a consideration of the pathologic basis upon which nebulization of antiseptic medication rests. It is proven beyond doubt that these nebulæ penetrate through the ramifications of the respiratory tract wherever it is possible for air to go. The first question to determine then is, whether the medicament can reach the origin of the disease. The second problem is, will it prove effective when the origin of the disease has been reached.

The air vesicle route is the rational one, since tubercle bacilli are discharged through the air and are found in the sputum. The absence of general infection in curable cases shows that the possibility of connection with blood vessels is not large. All inflammatory areas are areas in which the mechanism of extra vesicular interchange is materially interfered with. Large numbers of tubercle bacilli are discharged by the air vesicles. Few get into the blood or lymph current; therefore the air vesicles must be in closer touch with the tubercle bacilli. The presence of large quantities of pigment from the air around tubercular areas show that considerable absorption through the lymphatics from air vesicles is possible. A nebulized antiseptic having reached the area beyond the limit of current finds a greater probability of falling on the epithelial covering, and of being absorbed from it, than if it reached only to a zone of current, for in such an extra current area no force is operating save gravity. On reaching an extra current zone, nebulized antiseptics fall on squamous epithelium and encounter active phagocytic cells. In a zone of current they fall on ciliated epithelium and are wafted to the outside. These mechanic laws hold good whether the foreign body be tubercle bacilli, dust, or oils in suspension.

Since this is true of healthy lungs, is it true when we speak of tubercular lungs? Nebulized antiseptics suspended in the air will reach the cavities and air vesicles of tubercular lungs just as well as if these lungs were healthy. But where there are considerable zones in which the air vesicles are obliterated, these areas are necessarily very difficult to approach from the side of the air vesicle. Oil globules falling in the air vesicles of the neighborhood are picked up by the phagocytes, absorbed, and finding their way into the lymph and into the blood reach these masses of tubercular overgrowth with as much readiness as they can be reached in any other way. It is true that the presence of large areas without air makes success through air routes very difficult. Admitting that encapsulated tubercular foci cannot be reached by nebulized medicaments, is there any known therapeutic agent which can reach them? None that I know. Nature has walled off these encapsulated tubercular

*Read before the Medical Section of the Mississippi Valley Medical Association, at its Annual Meeting in Chicago, Oct. 4, 1899.

foci by connective tissue barriers, and in that way makes an effort to effect a cure. It therefore follows that the most rational way to treat locally these tubercular encapsulated foci is to attempt to render antiseptic their contiguous areas.

The pathologic conditions we have to deal with are those of lowered vital resistance in the lung tissue; development of tubercle bacilli; hyperplasia of fixed cells; formation of epithelioid cells; development of knot-like foci where the tubercular bacilli multiply; giant cell formation in which there is no new capillary formation; inflammation; degeneration of the blood vessels, lymphatics and air passages. In these areas, leucocytosis, further retrograde changes mixed and secondary infection.

That antiseptic nebulæ have a beneficial influence on the parts of the lung they reach there is no doubt. In such places the laws of osmosis and dialysis unite to aid in the prevention of new invasion. That these antiseptic nebulæ do not reach the encapsulated areas is no argument against the efficacy of this method of treatment, for neither can these areas be reached through the blood nor the lymphatics by antitoxins or any other method of hemotherapy, for no blood vessels or lymphatics reach these walled-off foci. Therefore our therapeutic resources are confined to persistent efforts toward preventing an extension of the tubercular process.

What is the scope of nebulization? 1. Control of cough. 2. Relief of dyspnea. 3. Intimate contact of antiseptic nebulæ upon 1400 square feet of respiratory capacity. 4. Inhibition to the extension of tubercular foci.

The advantage of controlling cough by inhalation rather than internal medication is self-evident. By bringing to the inflammatory areas through direct contact specially adapted formulæ of expectorant or anodyne combinations, you allay many or all of the distressing symptoms of cough.

The relief of dyspnea incident to the blocking of the larger or smaller tubes by catarrhal products is often marked. By means of expectorant types of nebulæ this as a rule is readily accomplished.

To properly use the antiseptic nebulæ in the treatment of pulmonary phthisis, it is essential that an abundance of compressed air be supplied at a steady pressure of from fifteen to thirty pounds to the square inch. The air should pass through a series of antiseptic chambers which entirely free it from all impurities. When it is purified and then compressed, a final measure of purification should be given by its passage through the oil of cloves. In cold weather it is better that the air should be heated to a temperature of 60° to 70° F. before using for the purpose of producing nebulæ. Given an abundance of air that is properly prepared for use, a well devised and constructed nebulizer is placed at a point convenient for the patient's use. Into this nebulizer a variety of formulæ can be used; the selection of the special combination suited to each case will depend largely upon one's experience in the use of this form of medication, and from a close study of the physical findings in the chest of each patient. Where it is desired to relieve cough, a mixture containing the tincture of stillingia and beechwood creasote, with lavolin as a base, is quite efficient. For the relief of dyspnea, which so often arises from a catarrhal blocking of the tubes, both large and small, expectorant combinations with carbonate of ammonia, syrup of scillæ, syrup of pruni virginæ, with lavolin as a base, often give marked relief. Should the case be one in which there are specially urgent symptoms to relieve, and where there is general toxemia from the disease, recourse should be had to the use of the well known and tried antiseptics. Nebulization of eucalyptus, oil of cloves and beechwood creasote have been often effective. A mixture of ten per cent. iodoform in solution with sulphuric ether and lavolin has been found very valuable. Frequently the use of pure Ceylon cinnamon oil in solution with lavolin as a base, in a preparation of about ten per cent., is an excellent stimulant for the bronchial mucous membrane.

Whilst all of the foregoing are standard antiseptics and have their range of usefulness in individual cases, it has been found that they do not inhibit the growth of culture media, hence nothing pathologically curative can be claimed for any of them. They are useful more for the relief of symptomatic conditions than for curative results. We have, however, at our command one antiseptic, a powerful germicide, from which there is reason to feel hopeful that valuable results will be secured in cases of pulmonary phthisis. This antiseptic is formalin. It has been found by experiment that culture media placed in an atmosphere saturated with a respirable solution of formalin are markedly inhibited and in some cases entirely arrested in their development. With this fact upon which to estimate the antiseptic value of formalin, we feel justified in claiming it to be our most valuable remedy in the treatment of pulmonary tuberculosis by inhalation.

In using formalin I begin with a four per cent. solution of the forty per cent. aqueous commercial solution in water. This is placed in the nebulizer and violently agitated by means of compressed air. I do not nebulize this solution, but favor evolution of the gas through a mechanical mixture and agitation due to the pressure of compressed air. In a short time cases develop and acquire an increasing tolerance for the formalin mixture, and by degrees its strength can be increased from four per cent. up to twenty per cent. One invariable rule should be observed in the use of this therapeutic agent, and it applies with equal force to those previously mentioned, to instantly cease their administration as soon as

cough ensues. By pursuing this plan the tolerance of the patient is readily secured and the time in which nebulization can be administered correspondingly lengthened.

There has within a year been established in this county a hospital devoted exclusively to the treatment of consumptives. This building is completely equipped with chemically pure compressed air, abundantly distributed, and the treatment of pulmonary phthisis by nebulization is there extensively used. I have records of a number of cases treated there since the 21st day of February, 1899, and desire to call your attention to some of the results secured from the treatment. All of the cases were in the second and third stages of phthisis. They numbered 50, all males. Of these we have a gain in weight among 15 of the 50, averaging from 2 pounds to 12 pounds; a loss in weight among 35, and in 5 cases there was neither loss nor gain in weight. When we reflect that the patients coming to this institution were in the worst possible condition of general health, all suffering from advanced tubercular processes in their lungs, that the food supplied is of poor qualily and in every case inadequate to the proper nourishment of the patients, I feel that the showing made in the short time elapsing from February 21st to August 15th is a very creditable one. I am quite aware of the inaccuracies that statistical statements may lead one into. I also appreciate the errors of deduction that one may easily make from such a general aggregation of cases, but I feel warranted in asserting that a very large proportion of the improvement, forty per cent., obtained in the number of cases enumerated has come from the persistent saturation of their respiratory passages with antiseptic nebulæ.

As far as the work has progressed, it certainly opens up a vista of therapeutic possibilities. As I have already stated, a lung with a tubercular process shows an immense amount of newly formed connective tissue. This is an effort on the part of nature to wall off the pathologic process. If nature is successful, there is nothing left but scar tissue, the tubercular process is inclosed and the patient recovers. If nature does not succeed, secondary mixed infection takes place; we have sepsis, and the patient dies. There is only one cure—that is by walling off the tubercular process by embryonal tissue. In my experience I am led to conclude that medicated vapors are of great value in favoring such a process. Nebulization always did and always will occupy a secondary place in the treatment of this disease; its function is that of a supportive role rather than the development of curative properties per se. We should remember that in advancing infection with the tubercular bacillus it is the vital resistance of the cells and the possibility of the reproduction of embryonal tissue which we must strive to secure. How much any treatment assists these processes it is difficult to say, but only along the lines of such assistance can success be reached. The treatment is not necessarily an effort toward the extermination of tubercular germs, but the stimulation of the cellular structures of the system by which the patient may resist invasion of the germs as well as the toxins which are manufactured and thrown out by the germs themselves.

There are many mechanic methods for the introduction of antiseptic nebulæ into the respiratory passages. A double glass tube so constructed as to occlude the anterior nares will enable the patient to inspire freely through the nasal passages. The nebulæ can be admitted by a single glass tube held between the lips slightly compressed, and inhalation will take place through the mouth as well as an admixture of atmospheric air through the nares. The preferable method is the use of a pure gum rubber funnel top, such as is used for lavage of the stomach. This funnel top is readily adjusted to all the irregularities of the facial contour and very little of the nebulæ escapes during its use. With this contrivance deep inspiratory efforts can be made simultaneously through the nares as well as the oral opening. The period of deep inhalation should be regulated by the easy tolerance of the patient to the nebulized medicament. Cough is the only warning sign which should cause us to desist for a greater or shorter length of time in the use of the nebulæ. With increasing use on the part of the patient, the time of contact of the medicament with the respiratory passages can be greatly lengthened. Again, the nebulæ can be respired directly from the exit opening of the nebulizer. This is a good way for those commencing the treatment, as the larger admixture of atmospheric air renders the deep inhalation of the nebulæ less irritant.

As a supersaturation of the respiratory passages with this nebulæ is the desideratum aimed at, the whole atmosphere of the room in which the patient is placed should be completely filled. Under these conditions every respiratory effort carries into the lungs a greater or less amount of nebulized medicament. So complete is the supersaturation attained that the expectoration of tubercular patients often has the characteristic odor of the medicament nebulized. The perspiration from the skin will also have this odor, and the ammoniacal odor of the urine is frequently lost in the characteristic smell of the nebulized medicament.

The adaptability of this form of treatment for individual use of patients in their homes is very wide. A great deal of mechanic ingenuity has been shown in efforts made to easily produce a large volume of compressed air for nebulization. Beginning with the small hand bulb, nebulization is only secured in a very inefficient and interrupted way. Passing from that primitive form up to the use of pumps, an almost infinite variety of mechanism has been devised. There

is the hand pump, which is tiresome and at best can only be operated for a comparatively short time. Then there has been an effort made to reduplicate power by means of long lever pumps, rotary and circular. The most feasible and practical means of obtaining compressed air for nebulization in localities where there is water supply to the homes, is in the use of the mechanism known as a compound pump. This pump is cylindrical in form. The water enters at the bottom and through a system of valves; the pressure of the water operating upon the valves efficiently compresses the air and forces it out through the opening, from which it is conveyed into the reservoir for use. The usual water pressure is from 16 to 25 pounds to the square inch. By the use of compound pumps the pressure may be increased to 35 or 40 pounds.

Should it be desired to take up nebulization to a considerable degree for the treatment of phthisical cases at home, facilities for the easy entrance of air into the pump are necessary. One of the first points to remember is to take the air from the highest point possible in the vicinity of the home so as to get it as free from surface contamination, odors and gases as possible. In order to do this, after the piping has been placed at the highest point, there are put at the outer end two or three screens varying in increasing fineness, so that the air is mechanically filtered through the screens, preventing the ingress of any dust or solid impurities with the air. When the air is mechanically filtered and compressed there should be placed an antiseptic chamber for the purpose of holding in suspension some antiseptic oil, as oil of cloves or oil of wintergreen. After this purification has been secured, the air is then ready for piping to any portion of the home where its use is desired. The plumbing connections should be made at the point of entrance of the water to the home, preferably in the basement, for the higher you carry the pump from the basement the greater the corresponding decrease in pressure. An apparatus such as I have described can be placed for about one hundred dollars.

While the inhalation of antiseptic vapor is not a specific for tuberculosis of the lungs, yet it plays an important role as a supporting means to other methods of treatment. There can no longer be doubt of the penetrability of properly compounded and vaporized medicaments. Their value in the treatment of pulmonary phthisis is largely determined by the medicament used and the amount respired. Clinical experience has proven their value. The weakness of this method of treatment lies in the therapeutic action of the medicaments at our command rather than in the mechanics for vapor production. Chemical researches of the future, we hope, will yet bring to our aid more powerful antiseptics than those now available; powerful in their selective antagonistic action upon the pathologic conditions of pulmonary phthisis, and yet harmless in their effect upon the healthy structures of the respiratory passages. We are strong in mechanism; weak in therapeutic resources.

I believe the chances of successfully coping with pulmonary phthisis are greatly enhanced by the general adoption by the profession of the inhalation method. It makes possible the creation of a sterilized atmosphere for the respiration by patients in their own homes. Too long have the profession been under the shrewd and often unscrupulous domination of those interested in the "commercialism of climate." In many instances incurable cases have been sent long distances from home, at great expense as well as bodily discomfort, allured by false hopes of the climatic cure of phthisis. Prominent specialists in localities supposed to have great virtue in the cure of this disease have reaped great financial rewards from the credulous faith of the incurably sick; and when at last the fallacy of such hopes has been demonstrated, the excuse is given they came "too late," and would they die at home must return at once. No intelligent physician can deny the value of altitude in the treatment of selected cases of phthisis; but the great rank and file of these sufferers leave the comforts of home to share the discomforts of a residence away, when their disease is equally amenable to home treatment. I plead for greater discrimination in the selection of cases that leave their home climate for often an elusive hope of benefit in other altitudes. With our more intelligent appreciation of the causative factor in the production of this disease, with the valuable curative agencies we can surround our patients with at their own firesides, and with the additional compensation that if cured at home they can forever remain there, we should use conscientious discrimination as to where and when we send our tubercular patients. While assiduously working to cure by any means in our power, let us not neglect the broad field of the prevention of tuberculosis.

There is every probability that the absolute extinction of tuberculosis from the world is not far distant. It is inevitable that when the race becomes fully cognizant of the dangers from tuberculosis and the simple measures necessary to stamp it out of existence, they will arise and forever make this scourge a thing of the past. Most hopeful is the outlook for the accomplishment of this great result. Not alone are the masses awakening to the needs of the hour, but those in high places, even royalty itself in England, is championing the cause of race emancipation from tuberculosis. Innumerable societies are springing up in every village, hamlet and city throughout the land; prevention, like territorial expansion, is in the air, and so comprehensive is this reform in its scope that a great international conference for war on tuberculosis has recently held sessions

in Berlin. Let us all do something to restrict this disease, so that with the dawn of the new century we may hope to see the tuberculosis problem solved by the most humanitarian methods, thanks to the combined efforts of physicians, health officers, statesmen, philanthropists, and the good will of an intelligent people.

Marshall Field Building.

A NOTORIOUS QUACK OF THE TIME OF CHARLES II. OF ENGLAND.

By G. R. Highsmith, M.D., Carrollton, Mo.
Ex-President of the Missouri State Medical Association.

JOHN WILMOT, Lord Rochester, was the son of Lord Wilmot who so loyally attended Charles II. after the battle of Worcester.

So distinguished was the family that, when Lord Rochester took the degree of Master of Arts, Lord Clarenden, then Chancellor of the University of Oxford, greeted him with a kiss.

After receiving his degree he traveled, as was the custom, and then, most unhappily for himself and those whom he corrupted by his example, he presented himself at the Court of Charles II. He was at that time a youth of 18, and, it is said, was the handsomest person of his age in all England.

Charles was enchanted with the simplicity, intelligence and modesty of one who was then an ingenious youth, with good aspirations and a staid and decorous demeanor.

But woe to the mother who trusted her son's innocence in that vitiated court. Lord Rochester forms one of the many instances we daily behold, that it is those most tenderly cared for who often fall most deeply, as well as most early, into temptation. He soon lost all trace of virtue, of principle, even of deference to received notions of propriety. For years he was never sober for a day. Notwithstanding his dissipation, he was a constant student of the classics and obtained a reputation as a wit which entitled him to take first rank.

He is the author of the celebrated epitaph on Charles II., viz.:

"Here lies our sovereign Lord, the King,
Whose word no man relies on;
Who never said a foolish thing,
And never did a wise one."

Long before he was thirty his constitution had become so impaired through dissipation that, like many other men of his day who had led dissolute lives, he took up the study of medicine in the vain hope of repairing a course of dissolute living.

He served an apprenticeship and took a degree in medicine, but where he obtained the degree we are unable to ascertain.

On one occasion he undertook to show Charles a lampoon he had written on a member of the court, but, being drunk, by mistake handed him one written on the King.

This led to a rupture between himself and the King, and the witty courtier was banished from Whitehall. Rochester had already spent his fortune and had long been living upon the bounty of the King. He was now compelled to rely upon his own resources. He tried the legitimate practice of medicine for a time, but life as an honest practitioner was too humdrum for one of his make-up.

He retired into the most obscure corners of the metropolis and, changing his name and dress, gave himself out as a German doctor named "Bendo," who professed to find out inscrutable secrets and to apply infallible remedies—to know by astrology all the past and to foretell the future.

Dr. Bendo was a man of the most finished address and fascinating manners. He was handsome, witty and unscrupulous, and was soon noted for his remarkable cures and wonderful revelations. Shop girls, chamber women and waiting maids were his first victims. But soon gay spinsters from the court came in their hoods and masks to be cured of imaginary maladies and to ascertain with anxious faces their fortunes.

The cunning Dr. Bendo noted in his diary all the intrigues confided to him by these lovely creatures. He also kept a footman who knew the court well, and used to dress him up in a red coat, supply him with a musket like a sentinel, and send him to watch at the doors of all the fine ladies to find out their goings on, after which he would write libels on these fair victims and levy blackmail. He died at the age of thirty-two.

Here is a man who at the beginning of his career possessed all the elements that contribute to a successful and useful life. He was handsome, educated and talented, and had nothing more to desire in the way of social distinction.

His reputation as a wit rests at this day upon productions which have long since been condemned as unreadable. As a writer his style was forcible, elegant and vivacious. He was a master of rhetoric, and, if he had chosen to write upon decent themes, would have been by far the most brilliant wit and greatest literary character of his time.

I cannot refrain from indulging in some reflections at this point.

While the reign of Charles II. was one of high civilization for that period, it was one of extreme credulity. Unbelief in religion went hand in hand with blind faith in astrology and witchcraft. There were but one or two newspapers published in London, and as there was no such thing as a system of popular education these found but few readers.

In this day and generation, when every village has a newspaper, and every congressional district has one or more well-patronized public schools, when knowl-

edge is so easily accessible and so earnestly sought after; in this day of discovery, invention and history, when it is almost impossible to find a locality where church spires are beyond the range of vision, when pulpits as a rule are occupied by an educated and cultured ministry; when we have but to press a button and lights are ablaze, wheels revolve, and the most delicate modulation of the human voice is conveyed over mountains and under seas for more than a thousand miles, we have "Christian Science," "Magnetic Healing," "Osteopathy," "Clairvoyancy," "Faith Healing," etc., the extravagancy and absurdity of whose claims would put Dr. Bendo to shame.

We pause and ask ourselves the question: Why are these things thus? Is the eternal gullability of the human family on the increase?

Is the Christian religion a sham? and is popular education a failure?

APPENDICITIS.*

BY F. T. MERIWETHER, Asheville, N. C.

WHILE these cases are not large in number, they present features illustrative of the general characteristics of the disease. Thirty-one cases were treated medically, most of those being in consultation, in all of which I advised operation, and of the 31 four died, a mortality rate of 13 per cent., and if these cases are all traced no doubt the mortality would be greater. Of the operated cases, 30 in number, three died, a mortality of 10 per cent. But of those lost after operation, not by operation, as is so often said, none can by any means attribute the fatality to the operation. In one case the patient had been treated by a practitioner for five days after general peritonitis had developed, and the operation was only done as a last resort; in another the mother refused operation until the father could reach Asheville, and so his chances were thrown away, he having general peritonitis; and in the third, death was caused by neglect of the neighboring negroes. They would not feed him, or in any way take care of him. All three of these cases would in all probability have died, for in all of them general peritonitis was present. All of the cases in whom a peritonitis was present when medically treated died. The probability is that all of such cases will die unless operated upon, and most of them will die even if operated upon; but it is the duty of the surgeon to offer the patient his only chance for life, even though the cause of surgery is damaged. We have all seen cases not only of appendicitis, but of other serious diseases, for instance rupture of the bladder, in which we could offer no real hope, and yet in which the patient recovered. In two of the cases reported no hope was offered to the family, but they were told it was their only possible chance, and the family accepting, operation was done, and the patients recovered.

In 10 cases concretions were found, in one of which the concretion was of a thick mucoid material, and in four there was only a single concretion. Except in the case of the mucoid mass, all of the concretions were composed of fecal matter, though in two a small amount of vegetable fiber was found imbedded in the mass. In one case the concretion was the exact shape and size of a cherry-seed, and it was only after division and examination that it real nature was discovered.

In only one case was vomiting marked, while in 5 cases there was no vomiting; in 8 cases the bowels were loose, 6 of these being gangrenous cases. This looseness of the bowels was in nearly all the cases due, I think, to the giving of cathartics before and during the attacks, which looseness helped not a little to make the operation a success.

Liver dullness was lost in all the pus cases, eight in number, and also in one case where pus was not present. In one of the cases the pus was thoroughly walled off. Sixteen of the cases were females, 14 males. The average age were $23\frac{2}{5}$ years, there being 16 cases 21 years of age and under, 24 cases 30 years of age and under; between 21 and 40 years there were 12 cases, and 2 over 40 years. The youngest case was 5 years old, the oldest 55 years. In only 10 cases could the appendix be felt before the operation, and in these cases the position and conditions determined by palpation were verified by the operation. Whether this inability to palpate the appendix was due to a lack of skill or not I do not know; but I think in many cases nothing but an indefinite resistance can be felt, particularly when the appendix points backwardly or lies outside of the cecum. The rigidity of the oblique muscle, and the distension of the cecum make it nearly impossible to feel the appendix. One can often approximate the position of the appendix by the lines of resistance felt; but it is doubtful if in all cases an absolute diagnosis can be made of the conditions present.

An interesting feature about one of the cases reported was that, though there was no pus present, and only a small amount of serum, the infection was so virulent that the operator was infected upon the hand, and was disabled for ten days. Within an hour after the operation a burning was noticed at one of the hair follicles upon the little finger, and in eighteen hours a vesicle had formed. Septic chills were had with quite a high temperature. Cultures from the vesicle showed the presence of the streptococcus pyogenes, staphylococcus pyogenes aureus, and one colony of the colon bacillus. A very minnte perforation was present near the tip of the appendix. In another case a very persistent cough, which the

*Author's abstract of paper read before the Mississippi Valley Medical Association at Chicago, Oct. 5, 1899.

patient said was synchronous with the recurrences of the appendicular trouble, was relieved. In a third case, one who had a history of typhoid fever occurring the year previous, the adhesions found at the time of the operation convince me that it must have been an appendicular trouble, for he had had no illness other than the supposed fever. In many cases the appendix looks apparently normal, possibly only congested; but a thorough examination of its calibre and a microscopic examination of its walls always revealed disease.

In all the cases the McBurney incision was used, and in no case was difficulty had in reaching the site of the trouble. Through and through suturing was used in a great many of the cases; but at present layer suturing with the sub-cuticular suture for the skin, all of catgut, is preferred. In most of the cases the appendix was inverted and buried.

I do not always advocate the operation necessarily to save life; but in many cases to prevent suffering and loss of time from business. Many cases will get over their attacks; but when we consider the low mortality of internal operation, and the high mortality of the delayed operation, the uncertainty of the exact condition of the appendix, or the outcome of the next attack, we are justified in advising early operation in every case.

Notes and Items

The following is the programme of the St. Louis Medical Society of Missouri, Saturday Evening, October 21st, 1899: "Value of Prostatic Examination," by Dr. J. L. Boogher.

Wachmann has ingeniously adapted the double-pointed tack in suturing the skin. He has modified the ordinary tack used in nailing matting to the floor by shortening the ends, making them about one-fourth inch in length and giving them a slight inward bend to prevent their coming out. Made in this way, and silver-plated, they seem to be quite devoid of irritating properties, and may be left in a wound for ten days.

The loss due to the slaughter of tuberculous cattle has heretofore fallen exclusively upon the owner of the infected stock. Belgium has adopted a plan of slaughtering tuberculous cattle and cooking the meat, by this means thoroughly sterilizing it. It is then sold at a low price. In this way a cheap and safe food is secured and the amount so raised is returned to the owner of the cattle.

At the last meeting of the Illinois State Board of Health there was a discussion upon tuberculosis, the methods for its control and the feasibility of sanatorium treatment. An effort will be made before the next legislature to establish a sanatorium for the treatment of tuberculosis under State auspices. The legislature will be asked to appropriate a half million dollars to secure a suitable site and to provide for the preliminary organization. This project has the endorsement of the State Board of Health.

Judge Colt of the United States Circuit Court has reversed the opinion of the Board of Appraisers, which held that surgical instruments imported to this country were dutiable. The Court in its decision said that they were to be classed under scientific instruments upon which no duty was to be collected. There is no doubt but that the profession will agree heartily with the dictum of Judge Colt, which will enable them to avail themselves of the free interchange of instruments with foreign countries that now obtains with books.

A Sanitarium School has been established near Paris, known as the Sanitarium d'Hendaye, which is said by *La Presse Medicale* to be the first prophylactic measure against infantile tuberculosis that has been made in France. The land for the sanitarium was given by M. Blondel, and is located at Parrier, near Nogent-le-Rotrou. The purpose of this foundation is to provide a school for feeble, tubercular and other children who are incapacitated by failing health from attending public schools. At the same time that their health is being attended to their education is looked after so far as their strength will permit.

George J. Monroe illustrates the influence of the mind upon the body by the following anecdote: "I remember when I was studying medicine, there were a number of students determined to make a great, strong shoemaker sick by telling him he was sick. A dozen of us managed to drop into his shop during the day. Each one remarked upon how badly he was looking. Before bedtime that night he sent for his family physician to see him on account of being sick. His physician happened to be one of the professors in the medical college we were attending. We explained to this physician what we had been doing. He reprimanded us for it, but I noticed he got about a dozen visits out of it."

Chaumier has recently undertaken a laborious investigation of the age at which babies walk, drawing a comparison between bottle-fed children and those brought up in the natural manner. Notwithstanding the claims that certain foods are just the thing for children, Chaumier's statistics show that the ideal artificial food for infants has not been discovered. He found that some babies walk at the age of ten months; of those walking at this early age, 5.6 per cent. were bottle-fed babies, while 12.7 per cent. were breast fed. Among hand-fed children, the number of children beginning to walk at the eleventh month is just equal to that found among the breast-fed babies that walk at nine months.

Wounds of the abdomen, Coley says, should be operated on at the earliest possible moment. This should include every case in which the peritoneum has been penetrated by a bullet. His statistics show that of those operated on within twelve hours 53.9 per cent died, while of those operated later the death rate reached 73.3 per cent. Profound collapse is a contraindication, except when it is due to severe hemorrhage, when the additional risk must be taken. The wounds of the stomach and large bowel are less serious than those of the small intestine.

The last will of Mme. La Baronne de Hirsch has distributed over sixty-nine million francs in various charities. Among the most important of these is the Jewish Alliance in France, the various Jewish educational institutions in New York and Canada, and the largest sum, ten million francs, to the Association for Jewish Colonists. Mme. Hirsch, in addition, has given two million francs to the Pasteur Institute of Paris for the erection of a biologic institute. This is to be constructed in the Rue Duto, upon land owned by the institute, and over the door in golden letters is to be inscribed, *Fondation Baronne de Hirsche.*

A fair test of the civilization of a country is furnished by a study of its public health records and the organization of its sanitary service. Perhaps the most striking of the late laws passed in Japan, as illustrating the progress of civilization in that country, is one making vaccination compulsory. All children are to be vaccinated at the age of ten months, and at six and twelve years. This places Japan in the same rank regarding vaccination as Germany, these being the only two countries in the world where vaccination and revaccination are compulsory; and she will doubtless show the same record as Germany in the practical elimination of small-pox from her mortality statistics. Compared with England and the United States, Japan is far ahead in its sanitary regulations for the prevention of small-pox.

Prof. Hirschberg has contributed an essay to Graefe-Saemisch's treatise on ophthamology, dealing with the antiquity of the science. He says that the oldest document dealing with the subject is that of the well-known Ebers' papyrus, in which we learn that the medical practitioners of Egypt were divided into three classes. This papyrus was thought to have been written from 1,500 to 2,000 years B.C. The three classes were physicians, surgeons, and thaumaturgists; the latter, we think, might be euphoniously translated into the language of the vernacular "thimble-rigger;" it evidently included all the quacks, Christian Scientists, osteopaths, and others, who probably flourished at that period, the Egyptians having reached quite a high degree of civilization, a *sine qua non* in the development of these fads.

The prevention of blindness, which is so largely due to ophthalmia neonatorum, is a subject that was recently discussed before the State Medical Society of New York by Dr. Lucien Howe. The statistics gathered show the not commonly accepted fact, that blindness is relatively more common in the country than in cities. This is attributed to the fact that Crede's method is employed much less frequently in country practice than in city. The city practitioner seems to have the fear of sepsis constantly before him, and he is thus moved to use all antiseptic precautions. While the sources of infection are less in the country, the absence of such precautions has of late years shown a relative increase in blindness in the rural districts. The country practitioner is urged to give the matter renewed attention, to the end that this preventible misfortune may be lessened in frequency.

The Victoria Cross is one of the most coveted distinctions of the British army and navy. It was instituted in 1850, and up to 1898 there were but 171 bestowed. The order not only includes officers, but also all enlisted men, and it is a significant fact that twelve of those who wear the cross are physicians. In 1895 the cross was bestowed on Dr. Whitechurch, who was with Robertson at Chitral. He, with Dr. Baird and a small command, was driven back by a superior force. In the engagement Dr. Baird was shot through the body. The wounded surgeon was put on a stretcher, and Whitechurch rallied the men to work their way back to the fort. From time to time the litter was set down and all hands helped to beat back the enemy. Finally the four litter bearers were killed. Then Whitechurch drew Baird's right arm over his shoulder, put his left arm around his waist, and so dragged and carried him back through a steady fire to the fort. Baird was again shot in the face, but Whitechurch was uninjured.

According to the registrar-general of England, the medical profession makes a very poor showing from the standpoint of longevity. In the professional occupations, out of every hundred of each class, 42 ministers, 34 teachers, 29 lawyers, and but 24 physicians reach the age of 70. It is possible that these statistics may be liable to error not apparent on casual investigation; but they confirm those previously obtained in other countries, which show that medical men are proverbially short lived. The records of the Illinois State Board of Health show that suicide is amazingly common among medical men, nearly 2 per cent. of the deaths recorded in the old list being due to this cause. This latter, however, must be taken with some allowance, as it is not pretended that this list was at all complete; it was not gathered with reference to any particular form of death, simply recording those who were reported; the number of suicides in that list far exceeds those occurring in any other occupation.

MEDICAL REVIEW

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H. W. LOEB, M.D., St. Louis,

AND

Willard Bartlett, M.D.	W. P. Loth, M.D.
Y. H. Bond, M.D.	F. J. Lutz, M.D.
W. B. Dorsett, M.D.	H. N. Moyer, M.D.
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All communications should be addressed to
Dr. H. W. Loeb, Managing Editor,
3559 Olive St., St. Louis, Mo.

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SMALL-POX AND IMPETIGO CONTAGIOSA.

It is stated that on August 16 a mysterious cutaneous disease was found at Downs, a town in Illinois, near Bloomington. The disease was said to be impetigo contagiosa, and had been steadily progressing for six weeks before the State Board of Health was called on for advice and assistance. Naturally it eventuated that the epidemic in question was small-pox, and immediate steps were taken to isolate the infected individuals, and to vaccinate all those who had been exposed to the disease. Like other epidemics of a similar sort this will soon be stamped out, as no well organized health department has much to fear from an epidemic of this disease. If, however, vaccination were anything like as general as it should be, even these small epidemics could not occur. The mistaking of small-pox for impetigo is a quite unpardonable error in diagnosis.

THE SCHOOL BENCH QUESTION.

A late number of the *Boston Medical and Surgical Journal* has an article upon school seats, in which various faulty positions assumed by pupils are considered. These are, in part, shown to be due to desks and seats of improper height, one or both not bearing correct relation to the pupil. This, the writer thinks, is to be obviated by a modified chair, which admits of the height being altered, and an adjustible spring back. It is possible that deformities may be caused by ill-fitting desks and seats, yet we think this is largely obviated by the restlessness of pupils. The attitudes which the author figures would undoubtedly result in crooked spines and twisted legs if they were maintained for any time, but according to our recollection of our school days we did not keep a given position many hours at a time. If it is hoped that a perfectly adjusted seat and desk, allowing the feet to rest squarely on the floor, will keep children quiet, we fear those who advocate it will be sadly mistaken. Of course, this is not an argument for ill-fitting seats, which are about as uncomfortable for the pupils as possible; still, when we look at the old-fashioned recitation benches in the little red school house, the same size for pupils of six and the older pupils of twenty-two years, we may well wonder why evolution has not changed the shape of our spinal column. Perhaps the self-same ancestors were of a tougher fibre than their descendants.

BERI-BERI IN THE UNITED STATES.

Two cases of beri-beri have been reported from Biloxi, Mississippi. These, with the recent case which was seen in Chicago, bring the subject very much to the front. The nature of this disorder is not definitely understood, some writers classing it as a special form of endemic neuritis, due to malaria. Acute and chronic forms are described. A significant fact in the history of this disease is that it has never, so far as we know, appeared in this country, notwithstanding that malaria is quite as frequent in some parts of the United States as it is in the tropics. Malaria, neuritis and neuralgia are by no means infrequently associated in the United States; but there is a striking difference in the clinical appearance of these complcations and cases of beri-beri. Late observations lend strong support to the view that this disorder is due to a specific organism. Whether the disease is infectious or contagious has not been definitely determined, one writer attributing it to the eating of decayed rice, which would place it in the group of diseases to which palagra belongs. Intestinal parasites have been said to cause the disease. Ogata of Tokio says that it is due to a specific bacillus. The tissues chiefly affected are the peripheral nerves; but with our knowledge of malaria and its parasite, it is clear that it is not to be included among the malarial infections. It is certain that the disease will acquire some importance from the fact that cases will be distributed about the country by the returning troops from Manilla.

PROTEOLYTIC ENZYMES AND ALCOHOL.

When Metchnikopf expounded his theory of phagocytosis he was not aware of the probability that such an anthropomorphic structure would be exploited to that degree of absurdity which we observe every day in the writings of so many bacteriologic, medical and surgical investigators. This theory was cherished and fondled by him and his disciples only for its eminent heuristic value; and this is attested by a glance at every issue of the *Annales de l'Institut*

Pasteur. If they still adhere to the name of this theory, they have long since begun to connect with it a different meaning. There is, however, no doubt that with the majority of our medical and bacteriologic essayists, phagocytosis has become a welcome and ever-handy tool to show their circumscribed conceptions of tactics and strategy; phagocytes are ordered about in our scientific publications like the lead soldiers with which we used to play in our boyhood days. It is exceedingly refreshing to step with one bound from these uncouth and misty notions into the fullness and clearness of scientific common sense. This has been the privilege of the convention of German scientists and physicians in Munich, to whom the father of the alexins, HANS BUCHNER, gave his matured ideas regarding the natural protective measures of the human (animal) organism. Buchner's lecture is so full of new and appealing thoughts that it appears in the highest degree desirable to make it accessible to every intelligent person by means of translation. To abstract or to review it would not only destroy the charm of the beautiful harmony of its logic, but it would, above all, incapacitate our readers for the appreciation of the simple subjects treated in it.

There is, however, one idea that reigns over all the details of this brilliant work—the blending of parts obtained in different lines of research into one structure, a structure that, while it is being deprived of anthropomorphic notions, is adapted at the same time; to serve the needs of suffering mankind. The phagocytocists always remind one of hunters sending out hounds trained to hunt down one particular kind of prey, but Buchner shows that the bactericidal (non specific) action of the leucocytes is but one form of expression of their general function and their task of resorption. The desassimilating side of organic life, which of course is inherent in every single cell, and which to a certain degree is present wherever life exists, finds its highest adaptation in the leucocytes; they produce and excrete proteolytic enzymes destined to resorb (or digest) the waste material of the organism and foreign substances that have succeeded in effecting an entrance. It is the blood which contains these substances in solution, and transports them everywhere. The general bactericidal bodies (alexins) do not differ in anyway from these enzymes; in fact, they are one and the same thing.

We would be, however, mistaken in the belief that this production of proteolytic or bactericidal substances in itself was an unsurpassable perfection of adaptation. On the contrary, we see that only too often the organism fails to use these protective means. We can force the organism to use them, we can artificially increase the amount of blood in a diseased organ or increase the circulation through such an organ, and we can thus furnish the latter with a larger amount of nutritive material and of proteolytic enzymes; and here Buchner begins an apotheosis of artificial hyperemia, which, in spite of Biers' efforts, has never before been sounded so loudly and convincingly, and so satisfactorily elucidated. The various forms of hyperemia are carefully considered in their respective values and possibilities; every remark, every observation opens up a new field of applicability. A great part of the paper deals with researches on the active hyperemia produced by alcohol-packings; the results are such as to insure the inauguration of a new era in the treatment of a great number of inflammatory processes; although, as is well known, the method has already empirically been used.

Buchner's address represents a scientific achievement of such a high character that we must express our earnest desire to see it soon in the hands of every medical man.

TRANSPORTATION OF ARMY MEDICAL SUPPLIES.

In view of the lamentable condition of the commissary and medical departments during the early part of the war with Spain, a recent incident connected with military service in Africa with the British Army was cited by Ogston at the late meeting of the British Medical Association. In 1885 an expedition of some 11,000 men, under Sir Gerald Graham, was sent to the Eastern Soudan, and landed on the Red Sea littoral. Following, as it did, on the death of Gordon, at Khartoum, and when the country was roused, many millions were spent and the expedition was furnished with everything, even to hospital ships, at large expense, everything being provided for the medical department that money could buy. In the bearer companies the men were from Aldershot; carts and harness from Woolwich; mules and muleteers from Spain; the dhoolies and dhoolie-bearers from India, and the camels and camel-drivers from Aden. The wagons arrived in one ship, the harness in another, the mules in a third, and all at different times. The ambulance wagons were landed in pieces; the pieces were mixed, and the men had to fit them together as they best could. When the mules and harness ultimately arrived it was found that while the wagons were made for one kind of draught the harness was made for another, and so on. The officers, non-commissioned officers, and men knew nothing of one another. The stores for the medical department came without storekeepers and without proper outward indications of what the packages contained. If an engagement had taken place on the day the forces landed, there would not have been a single bandage forthcoming for the wounded.

Current Medical Literature

DERMATOLOGY AND GENITO-URINARY DISEASES.

A Maculo-Anesthetic Lepride of the Palm.—D. W. Montgomery* reports an instance of a maculo-anesthetic lepride of the palm, because of its situation, as in no other respect did it differ from the same form of infiltration in other parts of the cutaneous surface. The patient was a boy, fourteen years old, born in Hawaii, where he resided till four years of age. His parents were in good health, and brother and sisters were also free from the disease. It was ascertained that a number of the maternal relatives were lepers, but the disease had probably been acquired not by heredity, but by prolonged association, as the boy had a full opporunity of contracting the disease by association with a native leper family with whom he used to play. A large erythematous patch with well-defined raised edges was found over the middle of the lower dorsal region, with two similar though smaller lesions above and to the right of the larger one. A search for bacilli was made but was fruitless; even without the bacilli the case was too marked to be mistaken.

Secondary Hydronephrosis Complicating Papilloma of the Bladder.—Krahn† reports a case, male, aged 49, who had at intervals during five years bloody urine; micturition being however absolutely painless. There never was any vomiting. Three years before the patient came under observation, a tumor in the right renal region had been diagnosticated by the attending physician. Of late, urination had become painful and very frequent. Examination of the abdomen showed a large tumor in the region of the right kidney, in which fluctuation could easily be made out. The cystoscope showed a papilloma at the right ureteral orifice of the bladder; the urine showed small quantities of albumin, leucocytes, red blood cells, but no casts. The differential diagnosis had to be made between the renal tumor, renal stone and tumor of the bladder; and the possibility that the papilloma discovered was a metastatic growth from the possible renal tumor had, of course, to be considered. The diagnosis of renal stone was excluded because there was no pain connected with the bloody micturition and the absence of other characteristic symptoms. The patient refused operation and left the clinic. After nine months he returned with the history that he had passed several small calculi, and that all of his symptoms were aggravated. This time he consented to an operation, and a cystotomy was made by Mikulicz. The papilloma, which had reached the size of a hen's egg, was removed and the stump cauterized. A second incision was made in the median line higher up and the right kidney palpated, but nothing in the nature of a solid tumor was found. The tumor of the bladder showed itself to be a benign papilloma, encrusted in places with phosphates. The further progress of the case was as follows: Never any fever, urine gradually increased in amount, blood gradually disappeared from it; four weeks after the operation the tumor in the region of the right kidney had practically completely disappeared. There can be no doubt that this was a case of second hydronephrosis, due to obstruction of the vesical opening of the right ureter by the papilloma. It is of note that the disappearance of the hydronephrotic sac occurred very gradually; that there was at no time voided immense quantities of urine, contrary to the general accepted report in these cases. It is further interesting to note that the signs of hydronephrosis showed themselves very early, certainly extending back three years.

*Jour. Cut. and G.-U. Dis., October, 1899.

†Deutsche Medicinische Wochenschrift, Sept. 28, 1899.

Unusual Situations for the Lodgment of the Gonococcus.—G. K. Swinburne* reports four cases; in two there was infection of para-urethral follicles previous to an attack of gonorrhea. In one case there was infection of a muco-cutaneous follicle in the prepuce, which was directly opposite the meatus and might easily act to reinfect the urethra. The fourth case presented an infected follicle at the frenum, resembling chancre. These cases exemplify the importance of using the microscope in all forms of purulent secretion, either from within the urethra or from the follicular glands near the meatus.

Primary Testicular Mumps.—L. B. Edwards† reports four cases of primary testicular mumps occurring during an epidemic of parotitis in Richmond. Three of the cases were in young men of fairly good health, who were medical students; the fourth case was a young man who boarded in the house with one of these students. There was no recognizable cause for any disease of the contents of the scrotum, beyond the prevailing epidemic of mumps, nor had these patients had a previous attack of parotitis. In three of the cases the left testicle was decidedly more affected than the right; in the fourth case both testicles were involved to the same extent. The constitutional symptoms were quite marked, and continued for eight days. There was no urethral discharge, no bladder irritation, no evidence of suppuration anywhere, nor did the involvement of the epididymis leave any sign of permanent change in structure. The neck glands were involved secondarily in three of the cases, and in only one case were the signs of parotitis at all prominent. Guaiacol was used in two cases without benefit, but phenacetin with salol and digitalis relieved much of the discomfort. Tobacco poultices

*Jour. Cut. and G.-U. Dis., October, 1899.

†Jour. Am. M. A., Oct. 14, 1899.

and afterwards absorbent cotton wet with 15 or 20 per cent. solution of ammonium chloride applied to the scrotum, and rest in bed, relieved pain and hastened recovery. Mention of other cases reported is made.

DISEASES OF CHILDREN.

The Koplik Spots in Measles.—Widowitz.* As long ago as 1880 Flint had described an exanthem in measles, which, however, only appeared on the third day of fever. In 1896 Koplik described small grayish white spots, with red areola appearing on the buccal mucous membrane, and due to desquamation of epithelium following the rupture of pre-existing small vesicles. These spots appear on the buccal mucous near the edges of the molars. In 158 cases examined by the author, the sign was present before any other symptom in 88 per cent. The diagnosis may not be made on this sign alone, but in cases of doubt it is often of great value in determining an early diagnosis. The sign has, however, been noted in a few cases of German measles.

Constipation in Infants.—H. M. McClanahan† limits his remarks to a consideration of this condition in infants from birth to the age of six months. The real causes may be grouped under two heads: the quality, quantity and method of feeding, and the anatomic condition of the colon. Of twelve cases treated recently, nine were classed under the first head. All of these were receiving food deficient in fat, and in some the casein was in excess; in others, fed on condensed milk, it was deficient. The important element in producing constipation was the lack of sufficient fats and the excess of casein. In the remaining three cases the constipation was due to the anatomic condition of the colon. The colon in the infant is normally larger than in the adult and more loosely attached. In some cases it doubles on itself, producing a reduplication of the folds and presenting a mechanical obstruction. The diagnosis of this condition must be made by exclusion. In the first class of cases, the question of diet is of importance; each case has its peculiarities, which must be studied. The character of the stools should be carefully noted; when light-colored and dry, the casein is to be decreased, and in some cases milk should be peptonized. If drug treatment becomes necessary, resin of podophyllum may be given in alcohol, in doses of from $\frac{1}{40}$ to $\frac{1}{24}$ of a grain. When the discharges are coated with mucus, phosphate of sodium is an excellent remedy, given in the form of saturated solution, with a little orange juice added. Strychnin, nitric acid and general massage are indicated where there is muscular debility. In the second class of cases food or medicine is of no avail. Digital exploration of the rectum is important, not only for diagnosis, but for treatment also. Injections should be given daily; the best method is to use a lisle-thread catheter, passed through a cork, the extremity of which is rounded. The catheter is passed into the bowel about two inches, and the cork is pressed against the sphincter muscle. After the water begins to flow, from a fountain syringe attached to the catheter, the latter is gently pressed up into the bowel. The colon is distended until the pressure is sufficient to unfold the bowel; this treatment will usually produce a free movement, but continuous treatment for a series of several months is required in these cases.

Hysteria in Children.—E. E. Mayer.* It is estimated that one-fifth of all the cases of hysteria occur in childhood. The definite general conclusions on which we can build our idea of hysteria are: 1. Organic alterations are absent. 2. The symptoms are dependent on psychic emotions. 3. The psyche is diseased. 4. Physical disturbances increase the psychic disorder. As to causes, it may be said, broadly speaking, that anything which weakens the psychic forces or inhibits them favors hysteric onslaughts. In children this can be considered under two phases: 1, improper education and environment; 2, heredity. The importance of the latter has been exaggerated. Habits are formed by imitation and repetition of the acts of parents; the child is brought up, trained and developed by the parents; unconsciously and consciously it imitates them and repeats their actions. Hysteria in children is very often monosymptomatic; the most important and frequent symptoms and symptom-complexes are given; they are generally severe and drastic, and never so slight and variable as found in the adult. The children are generally precocious and egotistic, impressionable, and emotionally irritable. The prognosis is much better than in older persons. The treatment is moral. The parents must be made to realize their responsibility and the effects of their influence; there must be no feebleness nor submission to the caprices of the child; but not too much vigor, and no corporeal punishment. In most cases parents are unable to treat their children as desired, and isolation is therefore necessary. The success of the specialist is due to the fact that he is firm and isolates the patient. Of the two methods to be used, (1) ignoring the patient completely, and (2) allowing him no time to be sick, the latter is the better. He is kept on his feet doing something till he falls asleep, and this is continued unceasingly till cured. In the other method, no one sees the child; it is ignored till the symptoms die out of sheer neglect. Massage and electricity, hydrotherapeutics and dieting are of benefit. Other diseases should be treated by appropriate remedies.

*Wiener klinischer Wochenschrift, Sept. 14, 1899.

†Jour. Am. Med. Asso., Oct. 14, 1899.

*Jour. Am. Med. Asso., Oct. 14, 1899.

Public schools are better than private ones for children of neurotic taint, and they are best trained away from home under good moral restraint.

EYE, EAR, NOSE AND THROAT.

A Profuse Escape of Cerebro-Spinal Fluid, Lasting Five Weeks, Without Cerebral Symptoms.—A. Lucae.* This case is regarded as unique by A. Lucae. No mention is found in literature of a similar one. A 17-year-old boy with a right sided otitis media was operated on through the mastoid. A subdural abscess was found. After the healing of the operation wound the purulent effusion still continued. In spite of constant treatment for the ear condition, the escape of fluid continued. Another operation was performed under chloroform. The old scar on the mastoid was opened, the dura was laid free and an opening was discovered which went through the dura and arachnoid, out of which liquid cerbro-spinalis flowed in such amount that the operation was stopped and the wound closed by drainage. The bandages had to be changed twice each day. Especially is to be remarked that, in spite of this loss of cerebro-spinal fluid, no symptoms on the part of the brain were observed, no fever, no vomiting and no pulse change. After five weeks the effusion ceased, and a persisting perforation of the drum remained. This profuse effusion was produced by an over-production of cerebro-spinal fluid, caused by the presence of a retained sequestrum of bone, which acted in the nature of an irritable body.

Locating Foreign Bodies in the Eye With the Röntgen Rays.—W. M. Sweet† presents briefly the results of work during the past two years in the use of the X-rays in locating foreign bodies in the eye. During this time the rays were employed for diagnostic purposes in 35 cases of injuries of the eyes, in which the character of the traumatism indicated the possibility of a foreign body having entered the globe. In 22 cases there was shown to be a foreign body present, the location being verified in 16 cases by magnet extraction or by enucleation, and in two cases by the opthalmoscope. Three cases were gun-shot injuries, and no operation was performed, while one patient did not return after the radiographs were made. A brief history of the 18 cases is given. The accuracy in the determination of the situation of the foreign bodies is not equaled by any other means. The correctness of the determinations is not influenced by the character of the metal, nor by the situation of the body, whether in the posterior or anterior portion of the globe or in the orbit. In every case of injury to the eye from flying pieces of metal, where the clouded media prevents the use of the opthalmoscope, a radiograph should be made at once. Since the non-magnetic quality of copper compels the use of forceps for its extraction, the work is rendered much easier by a knowledge of its exact position in the eye. For the removal of copper from the eye, a pair of forceps is described; the two arms are insulated from each other by fibrous material at the riveted end, and by enamel at the toothed portion. The extreme end of the latter is uncovered, as is also the point of each tooth. The two arms are connected by wires to a galvanometer and battery. If the two ends of the forceps touch the body the circuit is closed and is indicated on the galvanometer. The body is then grasped, and since the point of each tooth is not insolated, the fact that the body is held by the forceps is shown by the closure of the circuit. The forceps must not be removed from time to time to see if the body has been caught.

A Case of Epithelioma of the Conjunctival Enucleation.—Wheatly.* This case deserves mention, since after a duration of more than three years no involvement of the lymphatics in front of the ear was present. The patient, a man of 70 years, presented himself for treatment. Patient had noticed something wrong with his eye for three years, but it had only recently proved a source of trouble to him. Upon examination a warty growth, triangular in shape, was seen invading one-fourth of the corneo-sclerotic region of the left eye. It was limited behind by the left external rectus; above by the lower tendonous fibres of the superior rectus, and below by the external fibres of the inferior rectus; while the apex extended partly over the cornea and pupil, interfering with vision of that eye. Microscopic examination of a portion of the growth showed it to be a squamous-celled epithelioma. Although no glandular infiltration could be detected, the growth was manifestly increasing, so an enucleation was performed.

Conveyance of Infection Through the Medium of Ear Syringe; a Remedy.—F. C. Todd.† An ear syringe, to be aseptic and practicable, must meet the following requirements: 1. The point which comes in contact with the ear must be capable of sterilzation, and so constructed that it can be easily removed. 2. There must be no suction through this point. The fountain syringe answers these requirements. With this small glass points are used, and are changed after using in a septic case. The fountain syringe allows of no regulation of the current at will, and a bulb syringe has been devised which has a valve at each end. The solution is drawn in at one end through a rubber tube so large that the bulb is quickly filled. The rubber tube at the other end is smaller, and terminates in a point fitted with a shield to protect the operator from the return flow. The point can be unscrewed and sterilized.

*Berl. klin. Woch., Oct. 2, 1899.
†Phila. Med. Jour., Oct. 14, 1899.

*Lancet, September 9, 1899.
†Jour. Am. M. A., Oct. 14, 1899.

GYNECOLOGY AND OBSTETRICS.

What Becomes of Patients After Vaginal Puncture and Incision?—F. HENROTIN* discusses mainly the complex and miscellaneous septic collections in the pelvis that can be evacuated by vaginal incision. Sometimes the disease is in the tube, sometimes in the ovary, sometimes in the extraperitoneal tissue, and sometimes intraperitoneal and protected by exudate. The result depends on the discrimination and skill of the surgeon. Of all pelvic diseases in women which call for operative intervention and opening of the abdominal cavity, probably 25 or 30 per cent. can be operated on to better advantage through a vaginal incision and the remainder through a suprapubic opening. Whichever method is employed, what becomes of the patient after either incision depends, not on the incision *per se*, but on the characteristics and qualifications of the operator.

Dangers of Incubators.—WORMSER.† The chief precautions necessary to successful incubation of babies are regulation of the temperature, the introduction of sufficient warm, pure air, and appropriate nourishment at regular intervals. The author reports the death of an infant two hours after feeding. The post-mortem showed that death resulted from suffocation due to the inspiration of milk, in all probability during an eructation. Since the sounds produced by the child in coughing, vomiting, etc., cannot be heard by the nurse, the author recommends that the child be kept out of the incubator for a reasonable length of time after feeding, or watched very carefully for a time after being returned to the incubator.

Technique of Surgery of the Uterus and Adnexa Per Vaginam.—W. H. WATHEN‡ refers to some of the arguments against vaginal hysterectomy and the treatment of the uterine adnexa, claiming that there is no justification for these objections, if operations are performed by surgeons who are theoretically and practically familiar with the current technic in such work. No one can successfully controvert some of the arguments against vaginal hysterectomy unless he recognizes the necessity for and practices bisection of the uterus before separating the adhesions of the ovaries and tubes. Moreover too many instruments are used by most operators; there is seldom any use for a retractor in treating diseases of the adnexa through the vaginal vault, and there is no use for more than one in vaginal hysterectomy, and in most cases all may be dispensed with. While the danger of wounding an intestine or the ureter in removing the adnexa by vaginal incision is greater than when the uterus is first bisected, they may be so minimized as to be practically of no consequence. This method of operation is advocated for tubal pregnancy before the end of the third month, in post-puerperal infection, in the removal of pus in the pelvis, and as an exploratory operation in cases in which it cannot be decided whether one or both tubes should be removed.

*Jour. Am. M. A., Oct. 14, 1899.
†Centralblatt für Gynäkolgie, Sept 23, 1899.
‡Jour. Am. M. A., Oct. 14, 1899.

Celluloid Thread, According to Pagenstecher.—SCHLUTIUS* maintains that thread prepared according to Pagenstecher, viz., carefully sterilized and impregnated with celluloid, has many advantages not possessed by ordinary thread. In spite of its compactness and stiffness, knotting is not interfered with; there is less danger of infection because of the smooth surface, and for the same reason the threading of needles is greatly facilitated. The impregnation gives great strength to the thread and prevents its breaking at a critical moment.

Ventral Fixation of the Round Ligaments for Retroversion and Prolapsus Uteri.—A. M. LESSER† describes his method of operation for the ventral attachment of the round ligaments instead of the fundus uteri. When the ligaments are strong and there are no other complications, shortening by traction through the inguinal canal is the anatomic method, but when the ligaments are thin and weak, and when other complications exist with a retro or prolapsed position of the uterus, the operation described is by far easier. It can be more quickly performed in every instance with success, and avoids all the difficulties which may arise through weak ligaments, in Alexander's operation, in utero-ventral or any other fixation. It leaves the uterus in its free position, and neither interferes with the physiologic requirement nor changes to any material extent its relations with other organs. The various steps of the operation are fully described.

Vaginal Route vs. Abdominal Incision.—J. R. GOFFE.‡ The vaginal route is preferable for the following reasons: the vaginal incision is devoid of after pain, is free from the necessity of removing stitches, requires no adhesive plaster, leaves no scar, and has never been known to be followed by hernia. By vaginal incision is no longer implied a simple puncture or the making of a small opening, but a free incision throughout the entire length of the canal, supplemented by transverse incision in front of the cervix, and sometimes by a supplementary one posterior to the cervix. It affords the most ideal treatment for retro-position of the uterus, either with or without adhesion; the shortening of the round ligaments through the vagina is proving itself to be the operation par excellence. By this means the appendages may be removed, pelvic abscesses with plastic exu-

*Centralblatt für Gynäkolgie, Sept. 23, 1899.
†N. Y. Med. Rec., Oct. 14, 1899.
‡Jour. Am. M. A., Oct. 14, 1899.

date and strong intestinal and omental adhesions may be most satisfactorily and thoroughly treated. After operation, even the most radical, patients suffer very little pain; they are allowed to take any position in bed, and they are free from the slightest irritation to the bladder. The simplicity of this method, the safety and comfort which it insures the patient, should commend it to every operator.

HYGIENE AND BACTERIOLOGY.

On the Preparation and Use of Calmette's Antivenene.—Andrews* gives a detailed description of the symptoms of snake-poisoning, the composition of snake venom, and the method of preparing and using the so-called antivenene of Calmette. The venom of large snakes is ingeniously collected, and from this an extract prepared. Horses are immunized through the injection of increasing doses of the extract. The process of immunization requires sixteen months. The horses are then bled, and the serum collected according to well-known methods. The author describes a number of interesting and apparently successful experiments. The dose of serum required to protect a man against a lethal dose of the most deadly venom is from 10 to 40 cubic centimeters.

Bacteriology of Cerebral Spinal Meningitis.—Huenermann† is not able to agree with Jaeger, that the diplococcus intracellularis of Weichselbaum is the sole cause of epidemic cerebro-spinal meningitis. He has found the pneumococcus, streptococcus and staphylococcus in undoubted cases where there could be no question of a mixed infection, and he quotes Prof. Netter, of Paris, whose tables of cases showed just the same find.

A Simple Method to Distinguish the Colonies of Typhoid Fever from Coli.—J. A. Case.‡ A simple and positive means has been introduced by Piorkoski, of Berlin, who finds that in a specially prepared culture medium the typhoid colonies grow with a very luxuriant striation of small flagella, whereas the coli grow in their characteristic round form, with well defined outline. The culture medium is prepared as follows: Take 100 parts of urine that has undergone the ammoniacal fermentation and add five-tenths parts of peptone and three and three-tenths parts of gelatin, the whole heated over a water-bath for one hour and put into test-tubes with the usual precautions, sterilized in a steam-bath of a temperature of 100° C. for 15 minutes. The following day they are sterilized for only 10 minutes in order not to impoverish the solidifying properties of the gelatin. Then three tubes are inoculated, as follows: The first tube is inoculated by loops of the stool that has been rubbed up in a mortar, and a second tube is inoculated from the first one by four loops, and a third by six or eight loops from the second dilution. The contents of each tube is then poured into sterilized petri dishes, stood upon ice for 10 minutes, or in a cool place for an hour, to allow of moderate coagulation of the solutions. The dishes are next put into an oven and kept at a temperature of 22° C. for 24 hours, when the typhoid colonies are perceptible as transparent filamentous bodies alongside of the coli colonies, which are rounded with well-defined edges. The colonies may be found in all three dilutions, but more abundantly in the first and second, whereas a few hours longer may be required to find them in the third dilution. This is regarded as an accurate and simple means of positively diagnosing typhoid fever, and is recommended for trial. Typhoid colonies have been found as early as third day of the patient's indisposition. In all there have been 26 cases tested to date, in all of which there was a positive result, and their subsequent clinical history proved the accuracy of the test.

The Part Played by Insects, Arachnids and Myriapods, in the Propagation of Infective Diseases of Man and Animals.—Nuttall.* Insects, whilst serving as intermediary hosts, may play: (*a*) a passive part, when devoured by a host of the parasites they contain; (*b*) an active part, when they inoculate the parasite into a host by means of their proboscis. Insects, without serving as intermediary hosts, may play: (*a*) a passive part when they transport the eggs of animal parasites and deposit them in food; (*b*) an active part by carrying the diseased agent from a one animal to another and inoculating the parasites.

INTERNAL MEDICINE.

Skiagraph of the Stomach.—Bade† has discovered that if the stomach be inflated with air, an X-ray photograph of its outlines can easily and distinctly be obtained. The method has proven itself of special value in children, but experiments have also been successful in adults.

A Case of Chronic Trional Poisoning.—K. Vogel‡ describes briefly the seven cases of chronic poisoning from trional, reported in literature, and adds a full report of one of his own. The amount of trional taken was 127 grams in about six months, at regular intervals. The symptoms which are most prominent are weakness of pulse and heart, nephritic symptoms, together with a peculiarly burgundy red-colored urine, intestinal colic, and the general nervous condition. Constipation was also a prominent symptom.

*British Med. Jour., Sept. 9, 1899.
†Deutsche Medicinische Wochenschrift, Sept. 28, 1899,
‡Phila. Med. Jour., Oct. 14, 1899.

*British Med. Jour., Sept. 9, 1899.
†Deutsche Medicinische Wochenschrift, Sept. 21, 1899.
‡Berl. klin. Woch., Oct. 2, 1899.

Free Pus in the Stomach.—H. STRAUSS.* The presence of large amounts of pus in the empty stomach is a very uncommon occurrence, and the diagnostic value is different, according to the circumstances which produce it. H. Strauss considers this question and illustrates it by the report of a patient. Examination of the stomach washings, in the early morning before anything had been injected, showed about 30 c.c. of pure pus without any mixture of blood. The case was that of a wide-spread carcinoma of the fundus region and of the small curvature, together with a subphrenic abscess, which was situated between the anterior abdominal wall and the stomach. The author believes that the presence of pus in the stomach can be of valuable diagnostic aid, and believes that the presence of a measurable quantity of pus, which is repeatedly found in the empty stomach, can be taken as a strong evidence of the presence of a carcinoma of the stomach. In all cases of suspicion of gastric carcinoma, the stomach washings from the empty stomach should be examined for the presence of free pus.

Two Contributions to the Study of Acetonuria.—HUGO LUTHJE.† With a view of disproving or corroborating the theory presented by Meyer as to the existence of acetonuria in strychnin poisoning, the author experimented upon dogs. Though he succeeded in producing an increased acidity of the tissue juices, he could in no case demonstrate acetonuria after strychnin poisoning. He is inclined to doubt also the intestinal origin of the aceton found in cases of acetonuria, because of the small amount found in the intestinal tract, and the large quantity found in the organism. He offers no explanation or suggestion as to the probable origin.

Trauma of the Gastric Mucosa.—STERN‡ considers the effect of direct injury to the stomach as a result of striking on the abdomen, of being run over, etc., from which there may be tears, separation and necrosis of the mucosa. The cases may be divided into two groups: those where recovery ensues promptly, those running a chronic course. In the cases of the first group, in addition to the general symptoms that follow injuries, there is usually vomiting blood, which generally occurs within three days after the receipt of the injury, but may appear much later. Vomiting (not bloody) has also frequently been observed, especially after the hematemesis has ceased. Pain in the region of the stomach is very frequent. It will be observed that these cases show, primarily, the symptoms of ulcer of the stomach, and yet there can be no doubt that in many cases there is simply a tear without a round ulcer. The cases that run a chronic course usually show the picture seen in ulcer of the stomach when not of traumatic origin; but it is altogether probable that in many of these cases we have to do, not with an ulcer, but with a localized necrosis of the mucosa. The prognosis in these cases is on the whole unfavorable. Pyloric stenosis is a frequent sequela, as also perigastritis. It is possible that in these cases there may be a secondary infection from the necrotic areas. The relation of carcinoma of the stomach to trauma of this sort is still a moot point among pathologists. The author is at present not willing to recognize a definite relation. The bad effect of trauma in cases of pre-existing malignant disease is, however, very well known.

*Berl. klin. Woch., Oct. 2, 1899.

†Centralblatt für Innere Medicin, Sept. 23, 1899.

‡Deutsche Medicinische Wochenschrift, Sept. 21, 1899.

The Indications for the Weak Salt Springs (Kissingen, Homburg) in Cases of Diseases of the Stomach.—This paper, by C. DAPPER, is a conclusion of his work on this subject, published in *Der Zeitschrift für klinische Medicin* three years ago. The author then came to the following conclusions: 1. The weak salt springs are not only of benefit in cases of catarrhal conditions of the stomach which are accompanied by a reduced secretion of gastric juice, but also in certain cases of hyperacidity. 2. The diet of large amounts of fat is not contraindicated; on the contrary, the ingestion of large amounts of fat, together with the use of the saline waters, is very useful and easily carried out. The author, by means of observation on a much larger material than was then possible, finds that his former view has been strengthened, and adds the following conclusion: The two forms—the hyperacidity of neurasthenics and the hyperacidity of acid catarrh of the stomach—with atony of the muscles of the stomach, are the most favorable forms for the use of weak saline waters. In these conditions of hyperacidity the use of weak saline waters are more beneficial in their results than any other form of treatment.

NERVOUS AND MENTAL DISEASES.

A Contribution to the Study of the Gastric Crises of Tabes.—S. BASCH* refers briefly to the historic development of gastric crises, formulating the various conditions in which periodic vomiting and gastralgias occur besides tabes. The symptomatology of typical gastric crises as described in literature is given, together with the variations from the typical picture. From an analysis of twenty-two cases under his own observation the conclusion is reached that a strict classification of cases of gastric crises is not warranted. These symptoms are discussed, showing particularly those which differ from the typical case. The question of diagnosis is discussed and the differential diagnosis in each of the following conditions fully considered: 1. Ulcer of the stomach. 2. Ulcer of the duodenum. 3. Perigastritis. 4. Can-

*N. Y. Med. Rec., Oct. 14, 1899.

cer of the stomach. 5. Gastrosuccorrhea. 6. Cholelithiasis. 7. Attacks of vomiting and gastralgias of functional origin. 8. Cerebral vomiting. 9. Uremic vomiting. Prognosis in regard to duration and frequency cannot be given. Reports of complete cessation of the attacks are extremely rare. Treatment must be directed against the attacks themselves and the intervening periods. This is dwelt upon, especially with reference to the use of morphine, antipyrin and nitrate of strychnin, and the general management of the cases.

Hydrocephalus With Pseudo-Spastic Spinal Paralysis.—F. S. Kolle* reports this interesting case: The patient is now 21 years old; when three months old she was taken suddenly ill with the following symptoms: convulsions, fever, oscillation of the eyeballs, throwing back of the head, marked tympanites and persistent crying. After 27 hours the child recovered, but the head began to increase in size. The child was unable to use its lower limbs until the fifth year, despite good development and nourishment. When 11 years old she acted like an idiot. When seen first in 1893, the head was very much enlarged, body symmetrically developed and well-nourished, no symptoms referable to chest or abdomen. Reflexes of lower extremities were markedly exaggerated; sensation was normal throughout. There was a spastic disturbance in the gait with uncertainty of equilbrium, the step being of a spastic type. Muscular reaction was normal to primary and secondary direct or indirect faradic current. This spastic condition was attributed to hydrocephalic fluid gently compressing the lateral columns of the cord in the cervical and lumbar regions. One and one-half ounces of a clear, sparkling fluid was withdrawn on inserting an aspirating needle between the third and fourth dorsal vertebræ and through the membranes of the cord. Analysis proved this fluid to be hydrocephalic and of chronic nature. The patient showed little, if any, improvement in her walk, possibly because all the fluid external to the cord could not be drawn off, or because the cord, having been in a compressed state for years, failed to respond to the space produced by drawing off of the myelitic fluid, and allowed the same to fill up again. After the operation she was able to walk and the spastic conditions in her limbs began to improve after a year or more, but has not entirely disappeared after a lapse of six years.

A Case of Tetany in a Child With Scarlet Fever.—Kühn† describes a case of tetany following scarlet fever. Tetany is not rare in rachitic children or those with intestinal affections, but it has been less often observed in scarlet fever and in other acute infectious diseases. The case is that of a child of 4½ years, who during an attack of scarlet fever showed symptoms of twitching of the muscles and stiffness, with an enormously-increased reflex irritability, which took place while the child was perfectly conscious. The Trousseau and Chvostek symptoms were present very plainly. The electric examination could not be undertaken. There is no doubt about the correctness of the diagnosis in this case. It is probable that the toxins of the disease affected the nervous system directly.

*N. Y. Med. Rec., Oct. 14, 1899.
†Berl. klin. Woch., Sept, 25, 1899.

Contribution to the Study of the State and of the Development of the Nerve Cells of the Cortex in Newly-Born Vertebrates.—The following conclusions are noted by S. Soukhanoff* in regard to the nerve cells of the cortex in newly-born mammals. The cells (cat, rabbit) are less developed in general and are found in an embryonic state. This is shown by the state of the dendrites and by the small number of collateral appendices. In other animals the cortex of the newly-born does not differ from that of the adult. In general, it may be said that some animals show in their cortex practically an adult state of development, while others show an embryonic state.

PATHOLOGY AND HISTOLOGY.

A New Trocar for the Exploration of Pathologic Tissues.—This is a most ingenious and valuable instrument which O. Sgambati† describes. It consists of a canula and needle. Upon the latter is a little blade on a spring, which lies buried when the canula covers the entire needle, but which is thrown into action when the canula is partly withdrawn after once having been plunged into the tissue. The needle is next rotated, cutting out a little piece of tissue, which is then drawn up into the canula and subjected to microscopic examination. One can readily understand the importance of such a matter when he considers the difference in treatment of a sarcoma and an inflammatory new growth.

An Easy Method of Showing the Presence of Aceton in Urine and in Other Animal Fluids.—There agent which C. Oppenheimer‡ advises for demonstrating the presence of aceton in the urine and in other fluids, is composed of hydrarg. oxid. flavi., 50; acid. sulphur conc., cc. 200; aq. dest., cc. 1000. The sulphuric acid should be dissolved first in the water, then the oxide of mercury. After twenty-four hours the solution should be filtered. The method is as follows: To about 3 cc. of the urine to be examined, the reagent is added drop by drop. In albuminous urines the fluid becomes turbid immediately; in normal urine only after the addition of a certain quantity of the reagent. By the further addition of drops of the reagent a precipitate occurs,

*Revue Neurologique, Sept. 30, 1899.
†Centralblatt für Chirurgie, Sept. 23, 1899.
‡Berl. klin. Woch., Sept. 18, 1899.

which no doubt contains uric acid, kreatinin, and also a portion of the oxy-protein acid of Gottlieb. If the precipitate remains when the fluid is shaken, then a few more drops of the reagent are added, and the solution is allowed to stand for two or three minutes until the precipitate has thoroughly settled. Now the fluid is filtered until the filterate is perfectly clear; 2 cc. of the reagent is added and 3 or 4 cc. of a 30 per cent. sulphuric acid, and the mixture heated over the flame for a few moments. If a precipitate now occurs aceton is present in abundance.

Colloid Cancer in the Abdomen and Its Significance Relative to Infection.—E. D. FERGUSON,* after a careful review of the evidence relative to the parasitic origin of cancer, and the statistics of the numerical and relative increase of the disease, reaches these conclusions: 1. The dissemination of cancer to or through remote areas of an individual patient's body is a fact so frequently observed that we must accept the idea of some kind of an infection. 2. The rarity of direct infection from person to person, though the opportunity for such infection must have occurred in a great multitude of instances, shows that the infective agent is one not readily transplanted, or that it requires a specially prepared soil. 3. The vital properties of the anatomic elements of the growths furnish fully as adequate an explanation of this limited infective power as would any protozoon, bacillus or yeast fungus; on the other hand, we are not in a position to deny the existence of extraneous organisms which may be the source of an irritation to the cells which results in the production of cancerous growths. The idea of auto-infection from the cancer elements themselves furnishes a basis for the most hopeful line of treatment yet devised, namely, thorough and extensive removal of the parts involved at the earliest possible moment.

SURGERY.

Ecchinococcus of Both Lungs and Liver.—V. STEINER† demonstrated a case of an ecchinococcus involving both lungs and liver. A 20-year-old woman, who lived on a farm, where there were many dogs. For many years she suffered from vague stomach symptoms; for six months she noticed a hardness in the region of the liver. She complained of pain in the right side, cough and expectoration. Examination showed dyspnea and purely superficial respiration; dullness of left lung posteriorly, abdomen is soft; liver dullness begins at the sixth intercostal space; the left lobe reaches to the level of the umbillicus; the surface is rough and irregular; the right lobe is not enlarged. Exploratory puncture in the dullness of the left lung showed typical ecchinococcus fluid. Operation resorted to and the cyst was dissected away. Patient fully recovered. This case is of interest, on account of the rarity of the case in the first place and the successful surgical interference in the second.

Wood Pulp as a Material for Poultices and Surgical Dressings.—F. T. GORDON.* Wood pulp comes in sheets of any size and of varied thickness; it is comparatively cheap and easily obtained, and possesses the following valuable properties: When macerated in water, it swells up and absorbs from four to five times its weight of the liquid, retaining it for a long time. As the pulp becomes soft, a poultice of any desired consistence can be had by varying the amount of water. If hot water is used, the pulp absorbs so great a quantity that the resulting poultice will contain a greater proportion of hot water and retain its heat and moisture longer than a similar poultice made of bread or flaxseed. Antiseptic drugs soluble in water may be dissolved in the water in which the pulp is soaked, as it is unaffected by most drugs of the sort. When perfectly dry, the pulp will absorb fats and oils, giving an emollient and antiseptic substitute for salves, on lint, as a surgical dressing. It can be sterilized by heating in an ordinary sterilizer or oven. The indications for its use are readily evident from these properties. It is perfectly stable, does not deteriorate in any climate, is very light, if wetted by mischance it can be dried in an ordinary stove oven. It is very cheap, sheets four feet square costing fifteen or twenty cents.

Nontuberculous Infectious Processes in Bone.—A. L. CHUTE and E. H. BRADFORD.† The disease is almost unknown in the aged, is rare in adults, while in infants and young children it is very common. Its favorite seat is in the shaft of one of the long bones near the epiphysis. Though usually confined to a single bone, rarely adjacent bones may be involved. Osteomyelitis may be due to infection of the bone-marrows by the staphylococcous aureus, the streptococcous, the bacillus of Eberth, the pneumococcus, the colon-bacillus, the staphylococcus citreus and bacillus pyocyaneus, all of which have been found in the pus of these cases. Two conditions are necessary for infection to occur: there must be a region of lowered resistance, a vulnerable spot, also an avenue of infection. The infection may pass from without in, as well as from within out. The symptoms may be definite and classical, or they may be most vague, and present in certain cases nothing definite, but simply the picture of severe illness. In making the diagnosis, rheumatism must be considered, particularly in cases where the lesion is near a joint and the joint symptoms are prominent. If there is serious doubt

*Phila. Med. Jour., Oct. 14, 1899.
†Berl. klin. Woch., Sept. 25, 1899.

*N. Y. Med. Rec., Oct. 7, 1899.
†Phila. Med. Jour., Oct. 14, 1899.

a clean aspirating needle is fairly free from danger. Prognosis, which is as a rule good as far as life is concerned, depends on the seat of the disease, the sort of organisms present, the virulence of the culture, the resistance of the individual, and upon early and vigorous treatment. As to treatment, free incisions with active antisepsis should be made whenever there is reason to suspect the development of suppuration, or that it will develop, and in cases of high temperature, if the place for incision can be determined by pain and swelling, trephining and chiseling of the bone for drainage of pus may be necessary. Seven cases are reported illustrating the variety of symptoms presented.

Excision of the Hip; With Skiagraph Taken After Five Years.—A. E. Isaacs.* The patient, a man 28 years old, was operated upon five years ago for abscess of the hip. The head and neck of the femur were found to be carious, necessitating excision. Six months after operation the patient had a serviceable joint; there was shortening of two inches, and he could walk quite well without a crutch. The skiagraph, taken five years after operation, shows the reparative process in new joint formation. The upper end of the femur has grown into a mushroom-like expansion, very dense and solid in its inner side, where it rests under the large and projecting upper portion of the rim of the acetabulum. This portion of the acetabulum is also a very dense and solid bony growth, and from it extends a shelving process of new tissue, partly ossified, covering in the whole upper end of the femur. This may form ultimately a cap of solid bone over the new head of the femur. For the present the weight of the body is evidently supported by the enlarged and projecting upper part of the rim of the acetabulum, resting on the dense new bony growth on the inner side of the femur, and this is sufficient to give the man a good, freely movable, serviceable joint.

Acute General Septic Peritonitis.—E. LaPlace† reports a case of acute septic peritonitis treated by continuous irrigation with warm, normal salt-solution. It appears from the history of the case given: 1. That the peritoneal cavity stands with perfect safety a continuous irrigation with normal salt-solution, at a temperature of 100°, during 74 hours. 2. That in this case the infection of the peritoneum, which had been so violent and rapid, effectually ceased under this treatment. 3. The patient stood the irrigation with comfort; not complaining of cold, for the warm water was so copious in its flow as not to have time to cool. 4. The copious irrigation, it is believed, dissolved and carried off the toxins as they formed: it reached the most dependent portions of the peritoneal cavity, and removed infectious material; therefore effectual drainage was established. It acted as a tonic to the heart. No doubt some of the solution was absorbed into the system. During three days the infection was held in abeyance by the antiseptic action of the salt, and phagocytosis had free scope to destroy the infectious bacteria permanently. 5. This method has given great benefit in an apparently hopeless case; it is in accord with already well-established surgical principles, only novel in its application to the peritoneum. It may prove a valuable aid in the treatment of heretofore fatal cases of peritonitis.

Contribution to the Study of Pulmonary Surgery.—Sapiejko* claims that little success has attended our efforts to treat surgically affections of the lungs, because: 1, exact diagnosis of the same is so difficult; 2, we cannot tell all about the presence and location of pleuritic adhesions; 3, we find great difficulty in creating them. Diagnosis must be made either by puncture or by opening the pleura and actually palpating the lung. The author examined six cases in this manner and was in error in but one diagnosis—a pulmonary abscess being mistaken for an empyema. The danger of artificial empyema after pulmonary surgery must be taken into serious consideration. To avoid the same the lung tissue should be invaded through adherent pleuræ. Adhesions are found by a manometer, which, being in communication with the pleural sack, must register a negative pressure upon the same being opened, provided no adhesions are pierced. Sapiejko has operated successfully on six cases—gangrene, abscess, cavity (phthisical), and bronchiectasis being the maladies at hand. He uses the knife in preference to any form of cautery.

Automatic Drainage of Normal Cavities.—W. Jepson,† to overcome the objection of tubular drainage, employs a device which automatically removes or siphons the cavity empty of its contents. It consists of a glass chamber, to one end of which is attached a rubber bag to receive the discharge, and to the other end is attached a rubber tube for connecting with the cavity to be drained, either through the intermediation of a rubber or glass drainage tube. The glass chamber is nearly filled with sterilized water, and then suspended at the side of the bed where the patient is confined, or suspended at the side of the thorax or limb in draining the thoracic cavity or bladder in ambulating cases. The water in the glass chamber gravitates into the receiver, and as it does so creates a vacuum, which aspirates the liquid from the cavity desired to be drained. It has been found useful in draining the pleural cavity of purulent contents, in keeping the cavity free, preventing the ingress of air, and permitting the approximation

*N. Y. Med. Rec., Oct. 7, 1899.
†Phila. Med. Jour., Oct. 14, 1899.

*Revue de Chirurgie, July, 1899.
†Jour. Am. M. A., Oct. 14, 1899.

of the pulmonary and parietal pleura. It has been used with marked benefit also in draining the gall-bladder and urinary bladder after cystotomy, and in draining the peritoneal cavity.

A Case of Double Intestinal Intussusception.—HIPPEL* reports a case in a child of twenty months with the typical symptoms in which the laparotomy showed an ileo-cecal intussusception; the intussuscepted part was turned on its own axis one and one-half times. By careful manipulation it was possible to draw the invaginated bowel out. At this time a second invagination, involving that part of the ileum which had been pushed into the cecum, was discovered. This invagination was about five inches long and the bowel showed such marked changes that an attempt to separate caused tears of the serosa; for this reason, complete resection of this part of the ileum was made. The patient did not rally from the operation, dying after seven hours.

A Case of Hydrocele of the Sac of a Femoral Hernia.—MACARTNEY.† The patient was a woman, aged 56, and had been the subject of femoral hernia for six years. Had worn a truss for four years before she presented herself to the writer, when considerable pain and redness of the skin over the part pressed upon by the truss was observed. After several days rest in bed she was permitted to get up and discard the truss. About three months ago, after standing for several hours, she felt something give way in the groin, and pain set in at once. Case was observed for several days, when an operation was performed which revealed the following: The old sac of the hernia had been obliterated by the wearing of the truss, but left part of the omentum outside, which in the meantime united to the sac and the tissues in Scarpa's triangle, and secured its blood supply therefrom. The long-standing pressure had caused the rupture of a small vessel in the somewhat degenerated mass, forming a hematocele. Patient recovered completely after the operation.

A New Method for Removing the Gasserian Ganglion.—O. JACOB‡ advances, as a result of many dissections, a new method for performing this most difficult and dangerous operation. He has not done it as yet on the living, but, speaking from the purely anatomic standpoint, considers himself justified in claiming for his procedure advantages which are possessed by no other. The operation is divided into three distinct steps: 1. Removal of the outer wall of the orbit and exposure of the superior maxillary nerve, which is then traced to the base of the skull. 2. Trephination and exposure of the ganglion. 3. Isolation and removal of the ganglion.

*Deutsche Medicinische Wochenschrift, Sept. 28, 1899.
†Lancet, September 9, 1899.
‡Revue de Chirurgie, July, 1899.

Practical Therapeutics.

Guiacol Carbonate and Creosote Carbonate in Bronchitis and Pneumonia.—LEIFER.* The use of the above mentioned drugs, with their beneficial effects in chronic pulmonary diseases, has been reported some time since; but only recently has their action in acute diseases of the respiratory organs been observed. In most acute cases a typical fall of temperature occurs during the first twenty-four hours of treatment, and if continued for a sufficiently long period of time the apyrexia is permanent. In pneumonia creosote has been proven to be by far the most suitable remedy to employ, as it acts directly against the infection which is the cause of the disease. It possesses none of the unpleasant or dangerous properties of creosote. Its absorption by the intestines is slow and continuous, while its elimination takes place rapidly. Large doses of the drug should be administered until the temperature is normal, when the dose may be diminished in amount and given less frequently, but should not be discontinued until the last auscultatory sign has disappeared.

The Use of Thermol in Typhoid Fever.—G. B. MILLER.† Thermol, a definite chemical compound, lowers temperature by dissipating heat and inhibits heat-production by directly controlling the heat-producing center. It is nontoxic in its action and devoid of irritating properties. In eight successive cases of typhoid fever this drug was used, and they all were abortive under its administration. The patients were given 2½ grains every three hours, even when the temperature took a subnormal dip, and continued through the whole course of the disease until it remained at the normal line a week. By intermission in its administration control over the heat-centers is lost and its action on the intestinal microbes is not constant. There were no complications and no sequels. The diarrhea was effectually controlled, as was also the abdominal distention. The cases on the decline of the fever presented very little exhaustion and an early hunger developed. Brief reports, together with the clinical charts, of eight cases are given.

Bronchial Powders.—Maraglianoi's powders for bronchorrhea are composed of thirty grains of benzoic acid and fifteen grains of tannin. This mixture is divided into five powders, of which one is to be taken every two hours. This gives six grains of benzoic acid and three grains of tannin in one dose, which is claimed to have a markedly stimulating effect upon the bronchial mucous membrane, diminishing the secretion in simple catarrhal conditions of the bronchial tube.

*Lancet, Sept. 9, 1899.
†Phila. Med. Jour., September 30, 1899.